

*Agonopterix scopariella* Heinemann: Some notes of differences between it and allied species in Britain

By JOHN R. LANGMAID \*

Quite why this species was ever confused with *Agonopterix pulverella* Hübner seems a mystery, because the imagines are distinct macroscopically; and the foodplant of *scopariella* is *Sarothamnus scoparius*, while that of *pulverella* is *Genista tinctoria*.

*Agonopterix scopariella* Heinemann.

Sexes similar. Exp. 20-22 mm.

Head, thorax and tegulae brownish, scales paler-tipped.

Face whitish.

Palpi pale brownish buff, the rough-scaled second joint with fuscous-tipped scales; terminal joint with two blackish bands ventrally, more obscure dorsally; tip minutely black.

Antennae fuscous, somewhat paler toward base.

Abdomen dorsally greyish-brown with a row of paler scales of the segment below, giving a somewhat banded appearance; anal tuft brownish; ventrally pale greyish buff with a broad sooty black stripe laterally on each side sometimes interrupted at segments, and a row of black dots medially on each side.

Forelegs brownish buff, medial side of tibia distinctly reddish superiorly and and fuscous inferiorly; coxa and femur blackish, sprinkled buff; tarsi spotted dark fuscous superiorly.

Middle legs — coxa and femur blackish, sprinkled pale buff; tibia buff, sprinkled fuscous, with lateral hair-scales reddish; spurs fuscous; tarsi greyish-brown.

Hindlegs — coxa and femur blackish, sprinkled buff; tibia buff; spurs fuscous; tarsi brownish.

Forewings — costa straight.

Upperside brown, pinkish brown or reddish brown, more or less dotted black, a short black or dark brown line from dorsum near base obliquely upwards and outwards stopping half way to costa, in some specimens more or less obsolete; two black dots in disc at  $1/3$ , the inner one obliquely above the outer which is sometimes edged with white above; a distinct white dot in disc at  $1/2$  and another beyond it sometimes edged with black, a darker suffusion in disc above inner white dot; a row of terminal blackish dots or dashes, sometimes obscure; cilia darkish brown, paler around tornus. Underside shining fuscous with a paler margin along costa which is distinctly marked with four to six blackish spots.

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Hindwings grey, paler basally; cilia greyish with 3 to 5 concentric fuscous bands, sometimes very obscure. Underside grey, brindled with blackish toward apex.

*Agonopterix pulverella* Hübner.

Sexes similar. Exp. 20-22 mm.

Head, thorax and tegulae pale buff to light brown, sometimes with a pinkish flush, and more or less sprinkled darker brown.

Face paler.

Palpi unicolorous pale buff.

Antennae dark shining fuscous with pinkish or purplish reflections.

Abdomen dorsally fuscous, mottled buff; anal tuft buff; ventrally pale greyish-buff with a row of sooty black spots laterally on each side and another row of smaller black dots medially on each side.

Forelegs buff; tarsi broadly banded fuscous.

Middle legs brownish-buff; spurs fuscous; tarsi banded fuscous.

Hindlegs brownish-buff; medial spurs buff, shorter lateral spurs fuscous; tarsi faintly banded fuscous.

Hindlegs brownish-buff; medial spurs buff, shorter lateral spurs fuscous; tarsi faintly banded darker.

Forewings — costa distinctly arched.

Upperside pale buff, dorsal 2/3 more or less suffused pinkish or rusty at base, this suffusion broadening to apex, more marked in disc and upper part of termen; a blackish dot in disc toward base, sometimes obsolete; one whitish dot in disc posteriorly, also sometimes obsolete; many blackish scales scattered along veins; a row of indistinct terminal dark fuscous dots; cilia more or less pinkish or rusty, paler around tornus. Underside shining light fuscous, with pale buff perimeter broader on costa which is scarcely marked fuscous.

Hindwings greyish-white, darker toward apex where there are two or three fuscous dashes around margin; cilia greyish-white with two to four concentric light fuscous bands. Underside pale shining greyish-white, more buff toward apex where it is brindled fuscous.

The only species of the genus *Agonopterix* which could be confused with *scopariella* is *A. subpropinquella* Stainton, but the latter never has the white dots in the disc, and is generally of a smoother appearance.

The larvae of *scopariella* can be beaten from broom in the latter half of June and early July. If beaten in June, larvae of *A. nervosa* Haworth will almost certainly be found as well. *Nervosa* appears slightly earlier than *scopariella*, so in June the larger larvae are likely to be *nervosa*, while in July *nervosa* will most probably have pupated, and the larvae are more likely to be *scopariella*. If larvae of *A. assimilella* Treitschke. are beaten out also, then there is no problem with identifica-

tion as these are either dark brown or olive-green with a black head and plate. The larvae of *scopariella* and *nervosa* are quite distinct as juveniles, but can be almost indistinguishable when full grown. Similarly, as *nervosa* also feeds on *Genista tinctoria*, its juveniles and those of *pulverella* are also distinct, but again very similar when full grown. There follows descriptions of the larvae of the three specie:

- A. nervosa* Juvenile — yellowish brown, dorsal and subdorsal lines blackish, head dark brown, plate of 2 yellowish, dots black, and the larva has a slight downy appearance.
- Full grown — extremely variable. It can be green, yellowish or brownish-yellow; dorsal and subdorsal lines darker green in the green larvae, but brown or blackish-brown in the yellowish ones; head brownish or black; plate of 2 greenish in the green larvae sometimes with a black crescentic mark on each side, but yellowish-brown in the yellowish larvae; anal plate pale green or yellowish; dots black.
- A. scopariella* Juvenile — green or pale green; head, plate of 2, and dots black.
- Full grown — green; dorsal and subdorsal lines darker green; head light yellowish-brown or greenish-brown, sometimes with a small black dot on each cheek; plate of 2 green or pale yellowish-brown, with two small black dots sometimes confluent into a crescentic mark on each side; anal plate green; dots black.
- A. pulverella* Juvenile — greenish-white; head pale brown; plate of 2 greenish-brown edged with black; dots black.
- Full grown — green; dorsal and subdorsal lines darker green; head pale brown; plate of 2 pale brown or greenish-brown, sometimes with black edging of a variable degree; dots black.

So far, *scopariella* has been found in central-south and south-east England. East Anglia, South Yorkshire and several parts of Scotland. The distribution of *pulverella* seems to be confined to the southern half of England and south Wales. Both *nervosa* and *assimilella* are widely distributed throughout the British Isles.